DATA VALIDATION REPORT

Gold King Mine Release Incident

SAMPLE DELIVERY GROUP: 680-117013-1

Prepared by

MEC^X
12269 East Vassar Drive
Aurora, CO 80014

I. INTRODUCTION

Task Order Title:	Gold King Mine Release Incident
Project No.:	20408.012.001.0274.00 20408.012.001.0267.00
Sample Delivery Group:	680-117013-1
EPA Project Manager:	Steve Way
Weston Project Manager:	Dave Robinson
TDD No.:	0001/1508-04
Matrix:	Sediment
QC Level:	Stage 2A
No. of Samples:	2
No. of Reanalyses/Dilutions:	0
Laboratory:	TestAmerica - Denver

Table 1. Sample Identification

Location ID	*Lab Sample Name*	*Matrix Type*	*Collection Date*	*Method*
CC06_09212015_1300	680-117013-1	Sediment	9/21/15 1:00 PM	350.1, 351.2, 6010C, 7471A, 8082A, 8260B, 9012B, 9056A
Trip Blank	680-117013-2	Water	9/21/15 1:00 PM	SM6200B

II. Sample Management

Anomalies regarding sample management are listed below. According to a notation on the chain-of-custody, (COC), the samples were received below the temperature limits of 4□C ±2□C, at 0.6□C. As the samples were not noted to be frozen or damaged, no qualifications were required. The samples were received intact, on ice, and properly preserved. The COC was appropriately signed and dated by field and laboratory personnel. The presence or absence of custody seals on the cooler was not specifically noted.

The following issues were noted:

- The COC appeared to request polychlorinated biphenyls (PCBs) and semivolatile organic compounds (SVOCs), as the line item was listed as PCB/SVOC. The laboratory reported only PCBs in this SDG.
- Dioxin, hexavalent chromium, and radionuclide analyses were also requested on the COC. The results of these analyses were not reported in this SDG.
- Some corrections made to the COC were made overwriting the original entries. These corrections were not initialed or dated.

- The COCs did not list CLP sample IDs, and none were provided. The laboratory logged the samples per the location IDs on the COCs.
- The presence or absence of sample tags was not noted in the case narrative, and sample tags were not listed on the COCs.

Data Qualifier Reference Table

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins or PCB congeners.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
UB	The analyte was detected in the sample and in either the associated laboratory blank or field blank. If detected below the reporting limit (RL) the analyte result was reported as non-detected at the RL due to blank contamination. If detected above the RL, the analyte result was reported as non-detected at the reported result due to blank contamination.	The analyte was detected in the sample and in either the associated laboratory blank or field blank. If detected below the reporting limit (RL) the analyte result was reported as non-detected at the RL due to blank contamination. If detected above the RL, the analyte result was reported as non-detected at the reported result due to blank contamination.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
J+	Not applicable	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample, and may have a potential positive bias.
J-	Not applicable	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample, and may have a potential negative bias.

Qualifier	Organics	Inorganics
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
UJB	The analyte was detected in the sample and in either the associated laboratory blank or field blank; the analyte result was reported as non-detected at either the RL or the reported result. The reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The analyte was detected in the sample and in either the associated laboratory blank or field blank; the analyte result was reported as non-detected at either the RL or the reported result. The reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

Qualification Code Reference Table

Qualifier	Organics	Inorganics
H	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
C	Calibration %RSD or %D was noncompliant.	Correlation coefficient is <0.995 or calibration was noncompliant.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
L1	LCS/LCSD RPD was outside control limits.	LCS/LCSD RPD was outside control limits.
Q	MS/MSD recovery was poor.	MS recovery was poor.
Q1	MS/MSD RPD was outside control limits.	MS/MSD RPD was outside control limits.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	ICPMS tune was not compliant.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
F1	Field duplicate results were outside the control limit.	Field duplicate results were outside the control limit.
$	Reported result or other information was incorrect.	Reported result or other information was incorrect.

Qualifier	Organics	Inorganics
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

III. Method Analyses

A. Contract Laboratory Program Statement of Work for Inorganic Superfund Methods, 6010C & 7471A — Metals and Mercury

Reviewed By: P. Meeks
Date Reviewed: September 25, 2015

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *Sampling and Analysis Plan/Quality Assurance Project Plan for Gold King Mine Release, Silverton, San Juan County, Colorado* (2015), *United States Environmental Protection Agency Contract Laboratory Program Statement of Work for Inorganic Superfund Methods, EPA Methods 6010C* and *7471A,* and the *National Functional Guidelines for Inorganic Superfund Data Review* (2010).

- Holding Times: The analytical holding times, 28 days for mercury and six months for the remaining metals, was met.

- Analytical Method Blanks: There were no detects reported in the method blanks.

- Laboratory Control Samples (LCS): The recoveries were within laboratory control limits of 80-120% for mercury and the method control limits of 80-120% for the remaining analytes.

- Laboratory Duplicates: Laboratory duplicate analyses were performed on the sample in this SDG, CC06_09122015_1300, for the 6010C analytes. The relative percent differences (RPDs) for vanadium (43%), copper (59%), and zinc (35%) exceeded the control limit; therefore, results for these analytes were qualified as estimated (J) in the sample. The remaining RPDs were ≤20%. Based on professional judgment, this QAPP control limit was applied to results greater than 5× the reporting limit (RL) and, based on professional judgment, a control limit of ±RL was applied to results less than 5× the RL.

- Matrix Spike/Matrix Spike Duplicate (MS/MSD): MS/MSD analyses were performed on the sample in this SDG, CC06_09122015_1300 for the 6010C analytes. Results were not assessed when the native concentration was more than 4× the spike amount. Except for mercury, magnesium, potassium, beryllium, and vanadium, the analytes were reported from a 10× dilution in the parent sample. All other analytes were considered to be diluted out in the MS/MSD and the results were not assessed. The remaining recoveries were within the method control limits of 75-125% for the assessed analytes. The RPDs were ≤20%.

- Post Digestion Spike (PDS): No PDS analyses were performed on a sample in this SDG.

- Serial Dilution: There were no serial dilution analyses performed in this SDG.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were identified in this SDG.

    - Field Duplicates: There were no field duplicate samples identified in this SDG.

B. EPA Method 8082 — Polychlorinated Biphenyls (PCBs)

Reviewed By: P. Meeks
Date Reviewed: September 25, 2015

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *Sampling and Analysis Plan/Quality Assurance Project Plan for Gold King Mine Release, Silverton, San Juan County, Colorado* (2015), *United States Environmental Protection Agency Contract Laboratory Program Statement of Work for Organic Superfund Methods, EPA Method SW-846 8082,* and the *National Functional Guidelines for Organic Superfund Data Review* (2008).

- Holding Times: The extraction and analytical holding times were met. The soil sample was extracted within 14 days of collection and analyzed within 40 days of extraction.

- Analytical Method Blanks: The method blank had no target compound detects.

- Laboratory Control Sample (LCS)/LCS Duplicate (LCSD): Recoveries were within laboratory-established QC limits of 43-130% for PCB-1016 and 45-130% for PCB-1260. The RPDs were within the laboratory control limit of ≤50%.

- Surrogate Recovery: Recoveries were within laboratory-established control limits of 46-130% for tetrachloro-m-xylene (TMX) and 54-133% for decachlorobiphenyl (DCB).

- Matrix Spike/Matrix Spike Duplicate (MS/MSD): No MS/MSD analyses were performed on the sample in this SDG. Method accuracy and precision were evaluated based on the LCS/LCSD results.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC

data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were identified in this SDG.

- Field Duplicates: There were no field duplicate samples identified in this SDG.

C. EPA Method 8260 and Standard Method 6200B — Volatile Organic Compounds (VOCs)

Reviewed By: P. Meeks
Date Reviewed: September 25, 2015

The samples listed in Table 1 for these analyses were validated based on the guidelines outlined in the *Sampling and Analysis Plan/Quality Assurance Project Plan for Gold King Mine Release, Silverton, San Juan County, Colorado* (2015), *United States Environmental Protection Agency Contract Laboratory Program Statement of Work for Organic Superfund Methods, EPA Method SW-846 8260B, Contract Laboratory Program Statement of Work for Organic Superfund Methods, EPA Method 8260B, Standard Methods for the Examination of Water and Wastewater Method 6200B,* and the *National Functional Guidelines for Inorganic Superfund Data Review* (2008).

- Holding Times: The soil sample was extracted and analyzed within 48 hours of collection. The preserved aqueous sample was analyzed within 14 days of collection.

- Analytical Method Blanks: The method blanks had no target compound detects.

- Laboratory Control Sample (LCS)/LCS Duplicate (LCSD): Recoveries and RPDs were within laboratory-established control limits.

- Surrogate Recovery: Surrogate 4-bromofluorobenzene (BFB) was recovered above the control limit at 134% in sample CC06_09212015_1300; therefore, acetone detected in the sample was qualified as estimated (J). The remaining surrogate recoveries were within laboratory-established control limits.

- Matrix Spike/Matrix Spike Duplicate (MS/MSD): No MS/MSD analyses were performed on sample in this SDG. Method accuracy and precision were evaluated based on the LCS/LCSD results.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC

data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Trip Blank: Sample "Trip Blank: was the trip blank associated with the site sample. The trip blank was free from target compound contamination.
- Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were identified in this SDG.
- Field Duplicates: There were no field duplicate samples identified in this SDG.

D. VARIOUS EPA METHODS—General Chemistry

Reviewed By: P. Meeks
Date Reviewed: September 25, 2015

The samples listed in Table 1 for these analyses were validated based on the guidelines outlined in the *Sampling and Analysis Plan/Quality Assurance Project Plan for Gold King Mine Release, Silverton, San Juan County, Colorado* (2015), *United States Environmental Protection Agency Contract Laboratory Program Statement of Work for Inorganic Superfund Methods, EPA Methods 350.1, 351.2, 9012B, and 9056A*, and the *National Functional Guidelines for Superfund Inorganic Data Review* (2010).

- Holding Times: Nitrate as nitrogen (nitrate-N) and nitrite-N were analyzed approximately 20 hours beyond the holding time; therefore, the results for these analytes (both nondetects) were qualified as estimated (UJ). The remaining holding times, as listed below, were met.
  - Ammonia (350.1) – 28 days
  - Total Kjeldahl nitrogen (TKN, 351.2) – 28 days
  - Cyanide (9012) - 14 days
  - Nitrate/nitrite as nitrogen (nitrate/nitrite-N, 9056A) - 28 days
  - Remaining anions (9056A) – 48 hours
- Analytical Method Blanks: There were no detects in the method blanks.
- Laboratory Control Samples: As the ammonia and TKN methods were developed for waters, LCS results were assessed against the laboratory control limits rather than the method control limits. All ammonia and TKN recoveries were within the laboratory control limits of 75-125%. The method 9056A recoveries were within the method control limits of 80-120% and cyanide was recovered within the laboratory control limits of 75-125%. RPDs were within the QAPP control limit of ≤20%.

- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG. Method precision was evaluated based on LCS/LCSD results.

- Matrix Spike/Matrix Spike Duplicate (MS/MSD): MS/MSD analyses performed on the sample in this SDG, CC06_09212015_1300 for all analytes. As the ammonia and TKN methods were developed for waters, results were assessed against the laboratory control limits rather than the method control limits. All ammonia and TKN recoveries were within the laboratory control limits of 75-125%. The method 9056A recoveries were within the method control limits of 80-120% and cyanide was recovered within the laboratory control limits of 75-125%. RPDs were within the QAPP control limits or ≤20%.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.

    - Field Duplicates: There were no field duplicate samples identified in this SDG.

Validated Sample Result Forms: 680-117013-1

Analysis Method 350.1

Sample Name CC06_09212015_1300 **Matrix Type:** Solid

Lab Sample Name: 680-117013-1 **Sample Date:** 9/21/2015 1:00:00 PM

Analyte	Total/Dissolved	CAS No	Result Value	Reporting Limit	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Ammonia	T	7664-41-7	0.71	1.6	0.71	mg/Kg	U	U	

Analysis Method 351.2

Sample Name CC06_09212015_1300 **Matrix Type:** Solid

Lab Sample Name: 680-117013-1 **Sample Date:** 9/21/2015 1:00:00 PM

Analyte	Total/Dissolved	CAS No	Result Value	Reporting Limit	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Nitrogen, Kjeldahl	T	STL00296	140	230	140	mg/Kg	U	U	

Analysis Method 6010C

Sample Name CC06_09212015_1300 **Matrix Type:** Solid

Lab Sample Name: 680-117013-1 **Sample Date:** 9/21/2015 1:00:00 PM

Analyte	Total/Dissolved	CAS No	Result Value	Reporting Limit	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aluminum	T	7429-90-5	3600	1000	160	mg/Kg			
Antimony	T	7440-36-0	42	100	42	mg/Kg	U	U	
Arsenic	T	7440-38-2	340	100	41	mg/Kg	F2		
Barium	T	7440-39-3	8.2	51	8.2	mg/Kg	U F1	U	
Beryllium	T	7440-41-7	0.19	2.1	0.051	mg/Kg	J	J	
Cadmium	T	7440-43-9	5.1	26	5.1	mg/Kg	U F1	U	
Calcium	T	7440-70-2	270	2600	270	mg/Kg	U	U	
Chromium	T	7440-47-3	16	51	11	mg/Kg	J	J	
Cobalt	T	7440-48-4	5.1	51	5.1	mg/Kg	U	U	
Copper	T	7440-50-8	1800	130	8.7	mg/Kg	F2	J	E
Iron	T	7439-89-6	530000	1000	270	mg/Kg			
Lead	T	7439-92-1	80	51	17	mg/Kg			
Magnesium	T	7439-95-4	100	260	46	mg/Kg	J	J	
Manganese	T	7439-96-5	210	51	5.1	mg/Kg			
Nickel	T	7440-02-0	20	210	20	mg/Kg	U	U	
Potassium	T	7440-09-7	13	510	13	mg/Kg	U	U	
Selenium	T	7782-49-2	50	130	50	mg/Kg	U F1	U	
Silver	T	7440-22-4	3.1	51	3.1	mg/Kg	U	U	
Sodium	T	7440-23-5	2500	10000	2500	mg/Kg	U F1	U	
Thallium	T	7440-28-0	31	130	31	mg/Kg	U	U	
Vanadium	T	7440-62-2	71	5.1	0.51	mg/Kg		J	E

Analysis Method 6010C

Zinc	T	7440-66-6	340	100	36	mg/Kg	J	E

Analysis Method 7471A

Sample Name CC06_09212015_1300 **Matrix Type:** Solid

Lab Sample Name: 680-117013-1 **Sample Date:** 9/21/2015 1:00:00 PM

Analyte	Total/Dissolved	CAS No	Result Value	Reporting Limit	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	T	7439-97-6	0.039	0.098	0.039	mg/Kg	U	U	

Analysis Method 8082A

Sample Name CC06_09212015_1300 **Matrix Type:** Solid

Lab Sample Name: 680-117013-1 **Sample Date:** 9/21/2015 1:00:00 PM

Analyte	Total/Dissolved	CAS No	Result Value	Reporting Limit	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
PCB-1016	T	12674-11-2	62	190	62	ug/Kg	U	U	
PCB-1221	T	11104-28-2	85	190	85	ug/Kg	U	U	
PCB-1232	T	11141-16-5	29	190	29	ug/Kg	U	U	
PCB-1242	T	53469-21-9	28	190	28	ug/Kg	U	U	
PCB-1248	T	12672-29-6	46	190	46	ug/Kg	U	U	
PCB-1254	T	11097-69-1	57	190	57	ug/Kg	U	U	
PCB-1260	T	11096-82-5	54	190	54	ug/Kg	U	U	

Analysis Method 8260B

Sample Name CC06_09212015_1300 **Matrix Type:** Solid

Lab Sample Name: 680-117013-1 **Sample Date:** 9/21/2015 1:00:00 PM

Analyte	Total/Dissolved	CAS No	Result Value	Reporting Limit	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,1,1,2-Tetrachloroethane	T	630-20-6	16	34	16	ug/Kg	U	U	
1,1,1-Trichloroethane	T	71-55-6	4	34	4	ug/Kg	U	U	
1,1,2,2-Tetrachloroethane	T	79-34-5	11	34	11	ug/Kg	U	U	
1,1,2-Trichloroethane	T	79-00-5	8.7	34	8.7	ug/Kg	U	U	
1,1-Dichloroethane	T	75-34-3	7.4	34	7.4	ug/Kg	U	U	
1,1-Dichloroethene	T	75-35-4	10	34	10	ug/Kg	U	U	
1,1-Dichloropropene	T	563-58-6	6.4	34	6.4	ug/Kg	U	U	
1,2,3-Trichlorobenzene	T	87-61-6	11	34	11	ug/Kg	U	U	
1,2,3-Trichloropropane	T	96-18-4	16	34	16	ug/Kg	U	U	
1,2,4-Trichlorobenzene	T	120-82-1	6	34	6	ug/Kg	U	U	
1,2,4-Trimethylbenzene	T	95-63-6	9.4	34	9.4	ug/Kg	U	U	

Analysis Method 8260B

1,2-Dibromo-3-Chloropropane	T	96-12-8	30	67	30	ug/Kg	U	U	
1,2-Dibromoethane	T	106-93-4	10	34	10	ug/Kg	U	U	
1,2-Dichlorobenzene	T	95-50-1	8.7	34	8.7	ug/Kg	U	U	
1,2-Dichloroethane	T	107-06-2	7.4	34	7.4	ug/Kg	U	U	
1,2-Dichloroethene, Total	T	540-59-0	4.2	67	4.2	ug/Kg	U	U	
1,2-Dichloropropane	T	78-87-5	5.8	34	5.8	ug/Kg	U	U	
1,3,5-Trimethylbenzene	T	108-67-8	11	34	11	ug/Kg	U	U	
1,3-Dichlorobenzene	T	541-73-1	11	34	11	ug/Kg	U	U	
1,3-Dichloropropane	T	142-28-9	12	34	12	ug/Kg	U	U	
1,4-Dichlorobenzene	T	106-46-7	5	34	5	ug/Kg	U	U	
2,2-Dichloropropane	T	594-20-7	7.4	34	7.4	ug/Kg	U	U	
2-Butanone	T	78-93-3	16	170	16	ug/Kg	U	U	
2-Chlorotoluene	T	95-49-8	13	34	13	ug/Kg	U	U	
2-Hexanone	T	591-78-6	22	170	22	ug/Kg	U	U	
4-Chlorotoluene	T	106-43-4	11	34	11	ug/Kg	U	U	
4-Methyl-2-pentanone	T	108-10-1	28	170	28	ug/Kg	U	U	
Acetone	T	67-64-1	170	340	74	ug/Kg	J	J	S
Benzene	T	71-43-2	4.9	34	4.9	ug/Kg	U	U	
Bromobenzene	T	108-86-1	11	34	11	ug/Kg	U	U	
Bromochloromethane	T	74-97-5	22	34	22	ug/Kg	U	U	
Bromodichloromethane	T	75-27-4	6.5	34	6.5	ug/Kg	U	U	
Bromoform	T	75-25-2	10	34	10	ug/Kg	U	U	
Bromomethane	T	74-83-9	10	34	10	ug/Kg	U	U	
Carbon disulfide	T	75-15-0	7.4	34	7.4	ug/Kg	U	U	
Carbon tetrachloride	T	56-23-5	5.6	34	5.6	ug/Kg	U	U	
Chlorobenzene	T	108-90-7	6.5	34	6.5	ug/Kg	U	U	
Chloroethane	T	75-00-3	18	34	18	ug/Kg	U	U	
Chloroform	T	67-66-3	7.4	34	7.4	ug/Kg	U	U	
Chloromethane	T	74-87-3	6.7	34	6.7	ug/Kg	U	U	
cis-1,2-Dichloroethene	T	156-59-2	9.4	34	9.4	ug/Kg	U	U	
cis-1,3-Dichloropropene	T	10061-01-5	5.6	34	5.6	ug/Kg	U	U	
Dibromochloromethane	T	124-48-1	11	34	11	ug/Kg	U	U	
Dibromomethane	T	74-95-3	11	34	11	ug/Kg	U	U	
Dichlorodifluoromethane	T	75-71-8	6.3	34	6.3	ug/Kg	U	U	
Ethylbenzene	T	100-41-4	8.7	34	8.7	ug/Kg	U	U	
Isopropylbenzene	T	98-82-8	13	34	13	ug/Kg	U	U	
Methyl tert-butyl ether	T	1634-04-4	6.7	34	6.7	ug/Kg	U	U	

Analysis Method 8260B

Methylene Chloride	T	75-09-2	6.6	34	6.6	ug/Kg	U	U
m-Xylene & p-Xylene	T	179601-23-	17	34	17	ug/Kg	U	U
n-Butylbenzene	T	104-51-8	16	34	16	ug/Kg	U	U
N-Propylbenzene	T	103-65-1	18	34	18	ug/Kg	U	U
o-Xylene	T	95-47-6	7.4	34	7.4	ug/Kg	U	U
p-Isopropyltoluene	T	99-87-6	15	34	15	ug/Kg	U	U
sec-Butylbenzene	T	135-98-8	14	34	14	ug/Kg	U	U
Styrene	T	100-42-5	6.3	34	6.3	ug/Kg	U	U
tert-Butylbenzene	T	98-06-6	12	34	12	ug/Kg	U	U
Tetrachloroethene	T	127-18-4	13	34	13	ug/Kg	U	U
Toluene	T	108-88-3	5.6	34	5.6	ug/Kg	U	U
trans-1,2-Dichloroethene	T	156-60-5	4.2	34	4.2	ug/Kg	U	U
trans-1,3-Dichloropropene	T	10061-02-6	5.9	34	5.9	ug/Kg	U	U
Trichloroethene	T	79-01-6	8.7	34	8.7	ug/Kg	U	U
Trichlorofluoromethane	T	75-69-4	8.1	34	8.1	ug/Kg	U	U
Vinyl acetate	T	108-05-4	17	67	17	ug/Kg	U	U
Vinyl chloride	T	75-01-4	10	34	10	ug/Kg	U	U
Xylenes, Total	T	1330-20-7	7.4	67	7.4	ug/Kg	U	U

Analysis Method 9012B

Sample Name CC06_09212015_1300 **Matrix Type:** Solid

Lab Sample Name: 680-117013-1 **Sample Date:** 9/21/2015 1:00:00 PM

Analyte	Total/Dissolved	CAS No	Result Value	Reporting Limit	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cyanide, Total	T	57-12-5	1.2	2.7	1.2	mg/Kg	U	U	

Analysis Method 9056A

Sample Name CC06_09212015_1300 **Matrix Type:** Solid

Lab Sample Name: 680-117013-1 **Sample Date:** 9/21/2015 1:00:00 PM

Analyte	Total/Dissolved	CAS No	Result Value	Reporting Limit	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Nitrate as N	T	14797-55-8	2.5	5.6	2.5	mg/Kg	U	UJ	H
Nitrate Nitrite as N	T	STL00217	2.5	5.6	2.5	mg/Kg	U	U	
Nitrite as N	T	14797-65-0	2.5	5.6	2.5	mg/Kg	U	UJ	H

Analysis Method SM 6200B

Sample Name Trip Blank **Matrix Type:** Water

Lab Sample Name: 680-117013-2 **Sample Date:** 9/21/2015 1:00:00 PM

Analyte	Total/Dissolved	CAS No	Result Value	Reporting Limit	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,1,1,2-Tetrachloroethane	T	630-20-6	0.37	1	0.37	ug/L	U	U	
1,1,1-Trichloroethane	T	71-55-6	0.37	1	0.37	ug/L	U	U	
1,1,2,2-Tetrachloroethane	T	79-34-5	0.62	1	0.62	ug/L	U	U	
1,1,2-Trichloroethane	T	79-00-5	0.33	1	0.33	ug/L	U	U	
1,1-Dichloroethane	T	75-34-3	0.38	1	0.38	ug/L	U	U	
1,1-Dichloroethene	T	75-35-4	0.36	1	0.36	ug/L	U	U	
1,1-Dichloropropene	T	563-58-6	0.34	1	0.34	ug/L	U	U	
1,2,3-Trichlorobenzene	T	87-61-6	2.5	5	2.5	ug/L	U	U	
1,2,3-Trichloropropane	T	96-18-4	0.39	1	0.39	ug/L	U	U	
1,2,4-Trichlorobenzene	T	120-82-1	2.5	5	2.5	ug/L	U	U	
1,2,4-Trimethylbenzene	T	95-63-6	0.47	1	0.47	ug/L	U	U	
1,2-Dibromo-3-Chloropropane	T	96-12-8	1.1	5	1.1	ug/L	U	U	
1,2-Dibromoethane	T	106-93-4	0.44	1	0.44	ug/L	U	U	
1,2-Dichloroethane	T	107-06-2	0.5	1	0.5	ug/L	U	U	
1,2-Dichloroethene, Total	T	540-59-0	0.37	2	0.37	ug/L	U	U	
1,2-Dichloropropane	T	78-87-5	0.67	1	0.67	ug/L	U	U	
1,3,5-Trimethylbenzene	T	108-67-8	0.31	1	0.31	ug/L	U	U	
1,3-Dichloropropane	T	142-28-9	0.34	1	0.34	ug/L	U	U	
2,2-Dichloropropane	T	594-20-7	0.37	1	0.37	ug/L	U	U	
2-Butanone	T	78-93-3	3.4	10	3.4	ug/L	U	U	
2-Chloroethyl vinyl ether	T	110-75-8	5	10	5	ug/L	U	U	
2-Chlorotoluene	T	95-49-8	0.27	1	0.27	ug/L	U	U	
2-Hexanone	T	591-78-6	2	10	2	ug/L	U	U	
4-Chlorotoluene	T	106-43-4	0.45	1	0.45	ug/L	U	U	
4-Methyl-2-pentanone	T	108-10-1	2.1	10	2.1	ug/L	U	U	
Acetone	T	67-64-1	7	10	7	ug/L	U	U	
Benzene	T	71-43-2	0.43	1	0.43	ug/L	U	U	
Bromobenzene	T	108-86-1	0.5	1	0.5	ug/L	U	U	
Bromochloromethane	T	74-97-5	0.45	1	0.45	ug/L	U	U	
Bromodichloromethane	T	75-27-4	0.44	1	0.44	ug/L	U	U	
Bromoform	T	75-25-2	0.43	1	0.43	ug/L	U	U	

Analysis Method SM 6200B

Bromomethane	T	74-83-9	2.5	5	2.5	ug/L	U	U
Carbon disulfide	T	75-15-0	1	2	1	ug/L	U	U
Carbon tetrachloride	T	56-23-5	0.33	1	0.33	ug/L	U	U
Chlorobenzene	T	108-90-7	0.26	1	0.26	ug/L	U	U
Chloroethane	T	75-00-3	2.5	5	2.5	ug/L	U	U
Chloroform	T	67-66-3	0.5	1	0.5	ug/L	U	U
Chloromethane	T	74-87-3	0.4	1	0.4	ug/L	U	U
cis-1,2-Dichloroethene	T	156-59-2	0.41	1	0.41	ug/L	U	U
cis-1,3-Dichloropropene	T	10061-01-5	0.4	1	0.4	ug/L	U	U
Dibromochloromethane	T	124-48-1	0.32	1	0.32	ug/L	U	U
Dibromomethane	T	74-95-3	0.35	1	0.35	ug/L	U	U
Dichlorodifluoromethane	T	75-71-8	0.6	1	0.6	ug/L	U	U
Ethylbenzene	T	100-41-4	0.33	1	0.33	ug/L	U	U
Isopropylbenzene	T	98-82-8	0.35	1	0.35	ug/L	U	U
Methyl tert-butyl ether	T	1634-04-4	0.3	10	0.3	ug/L	U	U
Methylene Chloride	T	75-09-2	2.5	5	2.5	ug/L	U	U
m-Xylene & p-Xylene	T	179601-23-	0.35	1	0.35	ug/L	U	U
n-Butylbenzene	T	104-51-8	0.47	1	0.47	ug/L	U	U
N-Propylbenzene	T	103-65-1	0.38	1	0.38	ug/L	U	U
o-Xylene	T	95-47-6	0.23	1	0.23	ug/L	U	U
p-Isopropyltoluene	T	99-87-6	0.48	1	0.48	ug/L	U	U
sec-Butylbenzene	T	135-98-8	0.42	1	0.42	ug/L	U	U
Styrene	T	100-42-5	0.27	1	0.27	ug/L	U	U
tert-Butylbenzene	T	98-06-6	0.45	1	0.45	ug/L	U	U
Tetrachloroethene	T	127-18-4	0.74	1	0.74	ug/L	U	U
Toluene	T	108-88-3	0.48	1	0.48	ug/L	U	U
trans-1,2-Dichloroethene	T	156-60-5	0.37	1	0.37	ug/L	U	U
trans-1,3-Dichloropropene	T	10061-02-6	0.42	1	0.42	ug/L	U	U
Trichloroethene	T	79-01-6	0.48	1	0.48	ug/L	U	U
Trichlorofluoromethane	T	75-69-4	0.42	1	0.42	ug/L	U	U
Vinyl acetate	T	108-05-4	0.81	2	0.81	ug/L	U	U
Vinyl chloride	T	75-01-4	0.5	1	0.5	ug/L	U	U
Xylenes, Total	T	1330-20-7	0.23	1	0.23	ug/L	U	U